

Abstracts

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and analyzed for the treatment phase. In addition, an interim analysis of the subsequent observation period was conducted. Patients were treated before the DRG-system was introduced in Germany. Therefore, length of each hospitalisation was used as proxy for case-complexity and as criterion for assignment to one of 3 DRGs relevant for NHL-patients. Several sensitivity analyses were performed to address different DRG-grouping criteria and discounting scenarios. **RESULTS:** Mean cost per treatment cycle was €2700 for R-MCP and €1900 for MCP ($p < 0.0001$). Mean observation periods after end of initial treatment were 21.2 months for R-MCP and 17.6 months for MCP ($p = 0.02$). Hospitalisations for adverse events (–32%), new chemotherapies (–33%), treatment of progressive disease (–55%) and other reasons (–39%) were reduced in the R-MCP arm. This resulted in mean, undiscounted cost per patient in the observation period of €4600 for R-MCP and €7700 for MCP ($p = 0.02$). To adjust for the difference in length of the observation period overall monthly costs were calculated and amounted to €1230 for R-MCP and €1290 for MCP ($p = 0.67$). Sensitivity analyses did not result in major changes. Clinically, R-MCP resulted in an objective response rate of 85.6% vs. 65.5% with MCP. After two years event free survival for R-MCP was 69% vs. 44% for MCP alone ($p < 0.001$). **CONCLUSION:** Initially higher treatment costs of R-MCP were compensated by savings due to better efficacy. Combined with the clinical superiority of R-MCP, this regime is likely to prevail as the dominant treatment strategy compared to MCP alone at the final analysis.

PCN24

PEGFILGRASTIM PRIMARY PROPHYLAXIS IS MORE COST-EFFECTIVE THAN FILGRASTIM IN WOMEN WITH BREAST CANCER RECEIVING CHEMOTHERAPY IN FRANCE

Bogillot Q¹, Dubois R², Doan QV², Liu Z², Heissel A³, Di Palma M⁴
¹Amgen S.A., Paris, France, ²Cerner Health Insights, Beverly Hills, CA, USA, ³Amgen Europe, Zug, Switzerland, ⁴Insitut Gustave Roussy, Villejuif Cedex, France

OBJECTIVES: In breast cancer, primary prophylaxis with pegfilgrastim has been shown to improve health outcomes but its cost-effectiveness has not been evaluated in the French setting. Filgrastim is often used for less than the recommended 11 days (e.g., 5–6 days), which has been associated with sub-optimal outcomes. This study compared the cost-effectiveness of pegfilgrastim versus 11- and 6-day filgrastim primary prophylaxis in women with stage I–III breast cancer receiving chemotherapy with moderate to high FN risk in France. **METHODS:** A decision-analytic model was constructed from a health care payer's perspective. Costs included drugs, drug administration, FN-related hospitalizations and subsequent costs, and were based on ex-factory price listing and DRG Tariff. Effectiveness was measured as FN avoided and life-year-gained (LYG). FN risk (varied by days of filgrastim), FN case-fatality, relative dose intensity (RDI), and the impact of RDI on survival were based on a comprehensive literature review and expert panel validation. Breast cancer mortality and all-cause mortality were taken from official statistics. Model robustness was tested using sensitivity analyses. **RESULTS:** Compared with 11 days of filgrastim, pegfilgrastim saved costs and was more effective. Compared with 6-day filgrastim, pegfilgrastim avoided 10.5 absolute percentage point of FN (17.5% vs. 7%). The incremental cost-effectiveness ratio (ICER) was €10,295 per FN avoided. The average life expectancy was 16.27 years with pegfilgrastim and 16.16 years with filgrastim, yielding an ICER of €9652/LYG. Age of diagnosis and cancer stage had minimal impact on the results. Key influencing factors included relative costs of drugs and relative risk of FN. **CONCLUSIONS:** Use of pegfilgrastim in France may

dominate 11-day use of filgrastim and is cost-effective compared to 6-day use of filgrastim. The cost-effectiveness ratio is significantly below the commonly used threshold for cost-effectiveness ratios in Europe.

PCN25

TREATMENT OF ACTINIC KERATOSIS (AK) AND BASAL CELL CARCINOMA (BCC) WITH METVIX® (MAL-PDT) IN REAL LIFE PRACTICE: A COST OF ILLNESS AND MODEL VALIDATION STUDY

Caekelbergh K, Annemans L

IMS Health Economics and Outcomes Research (HEOR), Brussels, Belgium

OBJECTIVES: An original decision model has shown that methyl-aminolevulinate (MAL) is a cost-effective intervention in AK and better value for money than excision in BCC. The objective of this observational study was to confirm these results in real life in Belgium from a health-care-payers perspective. **METHODS:** The study was a prospective, multi-centre observational study in which patients meeting criteria for MAL-treatment were followed for 6 months after first application of methyl-aminolevulinate. Clinical response (CR) and cosmetic outcome (CO) were evaluated at the last available visit during the follow-up period. Socio-demographic data, treatment related data and safety data were collected. Inclusion period was October 2004–October 2005. **RESULTS:** 247 patients were evaluated (mean age: 69 years; 53% males). 47% of patients had AK with an average of 7.1 ± 0.4 lesions (32% new lesions); BCC-patients had an average of 1.7 ± 0.2 lesions (89% new lesions). As the majority of patients had multiple lesions, on average 0.797 tube of MAL was used per patient. AK patients had a mean of 3.9 dermatologist visits related to diagnosis, treatment and follow-up (BCC: 4.2 visits). In 83% of AK and in 84% of BCC patients, all lesions showed a complete CR. Good to excellent CO was found in 95% and 93% of AK and BCC patients respectively. Total cost of care (MAL-treatment plus follow-up) was €383 in AK and €298 in BCC-patients, with a higher effectiveness compared to the model. The model showed €255 for AK and €303 for BCC. Higher costs in AK were due to a higher mean number of lesions per patient compared to the model population (4.1 lesions per patient). **CONCLUSIONS:** This observational study confirms the cost-effectiveness shown in the original model for methyl-aminolevulinate in AK and BCC and shows that real-life data can be used to refine original decision models.

PCN26

PHARMACOECONOMIC ANALYSIS IN SPAIN OF THERAPY WITH ERLOTINIB, DOCETAXEL, PEMETREXED OR BEST SUPPORTIVE CARE IN PATIENTS WITH ADVANCED NON-SMALL CELL LUNG CANCER WHO HAVE FAILED PREVIOUS CHEMOTHERAPY REGIMENS

Rubio Terres C¹, Alvarez Sanz C², Marlene Gylmark GM³

¹Hero Consulting, Madrid, Spain, ²Roche Farma, Madrid, Spain,

³Hoffman-La Roche Inc, Basel, Switzerland

OBJECTIVE: To compare the cost-effectiveness of therapy with erlotinib (ERL), docetaxel (DOC), pemetrexed (PEM) or best supportive care (BSC) in patients with advanced non-small cell lung cancer (NSCLC) in Spain. **METHODS:** A Markov model with 3 health states (progression free, disease progression and dead) was developed. Time horizon: 2 years (monthly cycles). Survival and time to progression were obtained from 3 clinical trials. Utilities were obtained from a study performed in UK in 154 patients. National Health System (NHS) perspective (direct health costs) was applied. Resources used were estimated from

a panel of Spanish oncologists and from the literature. Unit costs were derived from Spanish databases (€ March 2006). Annual discount rate: 3.5% (costs and utilities). Sensitivity analyses for subpopulations, 3 years results (Weibull and Loglogistic distributions) and probabilistic (Monte Carlo) were performed. **RESULTS:** After 2 years more QALY per patient were obtained with ERL (0.24) than with DOC (0.23) and BSC (0.18). No differences versus PEM were observed. The total cost per patient was lower with ERL (€17,838) than with DOC (€20,392; €–2554) or PEM (€27,317; €–9479) and higher than with BSC (€8198; €+9640). ERL was the “dominant” treatment (more efficacy and lower costs) versus DOC and resulted in a cost saving versus PEM. Additional cost per QALY or life year gained with ERL versus BSC: €160,667 and €56,706, respectively. The sensitivity analysis confirmed the robustness of the base case analysis. If 1000 NSCLC patients were treated with ERL, the annual saving for NHS (substitution rates: 5%–65%) would range between €123,000–€1,600,000 (DOC replacement) and €448,000–€5,831,000 (PEM replacement). **CONCLUSIONS:** According to this model, advanced NSCLC treatment with ERL is more cost-effective than with DOC and PEM, with savings for the NHS.

PCN27

COST-EFFECTIVENESS AND COST-UTILITY OF FENTANYL TTS (DUROGESIC® 25, 50) VS. SR/IR ORAL MORPHINES IN THE MANAGEMENT OF CHRONIC CANCER PAIN

Estevez-Carrizo FE

University of Montevideo, Uruguay, Montevideo, Uruguay

OBJECTIVES: Chronic cancer pain has a devastating impact on quality of life. This leads to an increase in healthcare services utilization. The objective of the present study is to estimate the cost-effectiveness and cost-utility quotients of Fentanyl TTS treatment related to SR oral Morphine or IR oral Morphine in patients with moderate-severe chronic cancer pain. **METHODS:** Designed from the perspective of the health care provider, with a 12 weeks horizon and a pharmacoeconomic decision making model (decision tree). Cost-effectiveness relationship estimates was \$15 per day of pain control (DPC) for Fentanyl TTS, \$.3 per DPC for sustained-release Morphine and \$.64 per DPC for immediate release Morphine. Cost-utility relationship estimates was \$23.1 per Quality Adjusted DPC (QALD) for Fentanyl TTS, \$18.9 per QALD for sustained-release Morphine and \$53.6 per QALD for immediate release Morphine. This means that the cost of a QALD when treating patients with Fentanyl TTS is similar that patients treated with SR Morphine and less than half of patients treated with IR Morphine. **RESULTS:** The incremental cost-effectiveness relationship (ICER) for Fentanyl TTS vs. SR Morphine was of \$20.2 per extra DPC, while the ICER for Fentanyl TTS vs. IR Morphine was \$26.1 per extra QALD. The incremental cost-utility relationship (ICUR) for Fentanyl TTS vs. Sustained-release Morphine was \$24.9 per extra QALD and of \$19.2 per extra QALD for Fentanyl TTS vs. IR Morphine. The pharmacoeconomic model constructed for the analysis was duly validated through a one way sensitivity analysis. **CONCLUSIONS:** We concluded, compared to oral Morphines, Fentanyl TTS is a cost-effective choice for the treatment of moderate-severe cancer pain. The present analysis allows to draw the conclusion that the better efficiency of this new transdermal pharmaceutical form of Fentanyl, is mainly due to an improvement in quality of life.

SHOULD FOTEMUSTINE BE USED AS THE FIRST LINE TREATMENT

Faluta T, Czech M, Pachocki R

Servier Polska, Warsaw, Poland

OBJECTIVE: Dacarbazine is routinely used as the first line treatment of disseminated malignant melanoma with brain metastases in Poland. A head-to-head randomized controlled trial (RCT) showed a clinical superiority of fotemustine over dacarbazine in this indication. At the same time patients' access to many innovative medicines in Poland is limited because of budgetary constraints. Even if an innovative medicine is more effective and cost-effective, it is not applied since it is more expensive for the health care budget. The main objective of this analysis is to verify whether an administration of fotemustine is economically justified for the National Health Fund (NHF)—the public payer in Poland. **METHODS:** A cost-minimization analysis was carried out from the NHF point of view. Direct medical costs were divided according to accounting standards into two groups: cost of drugs and cost of hospitalization required in order to administer the drugs. The majority of unit prices used in calculations were derived from the official price list of the Pomeranian Sickness Fund (which is the NHF part now). Following clinical standards and the length of the RCT the time horizon is 26 weeks. **RESULTS:** The cost of fotemustine administered to one patient (€4700) is higher than the cost of dacarbazine (€676) by €4024. The cost of hospitalization necessary to administer dacarbazine amounts to €5884 and is higher than cost for fotemustine (€1284) by €4600. The total cost in fotemustine group amounts to €598 and was lower than cost of dacarbazine (€6560) by €576. **CONCLUSION:** Substitution of dacarbazine with fotemustine in the treatment of disseminated malignant melanoma with brain metastases is a good alternative not only for Polish patients (as clinically better) but also for the Polish NHF (as cost-saving). Ex. rate 1 € = 3.98 PLN.

PCN29

ECONOMIC ADVANTAGES AND TIMESAVING OF USING OXALIPLATIN CONCENTRATED SOLUTION VERSUS OXALIPLATIN LYOPHILISED POWDER FOR INFUSION

Favier B¹, Spath HM², Anhoury P³, Pacull A³

¹Centre Leon Berard, Lyon, France, ²GRESAC, Lyon, France, ³IMS Health Consulting & Services, Puteaux, France

OBJECTIVES: Oxaliplatin solution form is a new and safer formulation of oxaliplatin avoiding the reconstitution step during cytotoxic preparation. The main objective was to assess the economic impact using oxaliplatin concentrated solution compared with the lyophilised powder form from the hospital pharmacy point of view. **METHODS:** Due to the equivalent efficacy between the 2 formulations, a cost-minimisation analysis with a hospital perspective was performed comparing the solution versus the powder. A single-centre observational study was conducted in a French Cancer Centre. The cytotoxic preparations were assessed using the powder in a first time and the solution form in a second time. The same staff member manipulated both preparations in order to avoid any bias. Two independent observers collected the results from the 30 manipulations. The first endpoint assessed was preparation time. Secondary endpoint was overall cost associated with this preparation, which included costs associated to preparation time, material and cytotoxic waste management. **RESULTS:** The reconstitution step was avoided using the solution form. The time saved with the solution form versus the lyophilised powder was 139 seconds per preparation. The overall avoided cost represented €1.04 per preparation using oxaliplatin solution form. This total cost could